

tain colloids, such as fibrin, are especially adapted to form layers or coatings. If a freely suspended body exists as a nucleus, the layers will be concentric. If crystalline substances are precipitated with the colloids, the stratification is conspicuous. The radial crystalline lines seen at times are secondary to a primary concentric layering. Of the calculi found in the human body, layer formation is usually seen in those of the urinary tract, also in salivary and pancreatic calculi, and in the calcium-bilirubin gallstones. Concrements which are largely colloidal, such as the prostatic and arthritic, are also lamellated. Cholesterol stones form an exception; inflammation is not necessarily present, inspissation from stagnation being sufficient to form them. The colloidal constituents of stones should be kept in mind in all non-operative therapeutic measures.

Spastic Constipation and Antiperistalsis.—G. BOEHM (*Deutsches Archiv f. klin. Med.*, 1911, cii, 431) has made a radiologic study of several cases of spastic obstipation with reference to antiperistalsis. After reviewing Cannon's experimental work on rabbits, wherein antiperistalsis from the transverse colon to the cecum was described, he discusses the radiologic studies in man. Here the cecum was found to show bismuth shadows four and one-half to six hours after a bismuth meal. They gradually grew larger and projected down into the pelvis. In patients suffering with chronic constipation he found that in the transverse colon the fecal mass was broken up into small lumps at a well-defined ring, and it is from this ring that he feels the antiperistaltic waves arise. In rabbits he succeeded in relaxing the ring by giving atropine, but in man the drug was without apparent effect.

The Serum Diagnosis of Trichinosis.—H. STRÖBEL (*Munch. med. Woch.*, 1911, lviii, 672) has made use of the method proposed by Merkel to obtain trichina embryos free from muscle fibers. The infected muscle is digested in hydrochloric acid and pepsin; after solution is practically complete, centrifugalization throws down the embryos. The antigen is now prepared by digesting the worms in sodium hydrate or in anti-formin. The solution is not permanent, but may retain its activity for about two weeks. The dried embryos may be preserved almost indefinitely. Using antigen prepared in this way, Ströbel was able to demonstrate fixation of complement in part of a small material. The antibodies are not demonstrable within two weeks, but exist in the serum after ten weeks. Indeed, Ströbel has obtained fixation of complement in one case one and one-half years after an attack of trichinosis. The reaction appears to be specific, but its value as an early diagnostic sign has not been shown.

The Demonstration of Tubercle Bacilli in the Urine.—R. BACHRACH and F. NECKER (*Wien. klin. Woch.*, 1911, xxiv, 419) consider smegma bacilli and large quantities of pus in the urine the two chief obstacles to the demonstration of tubercle bacilli. They discuss only the latter. When pus is abundant, it is often difficult to find the bacilli in stained smears unless the organisms are very abundant. The anti-formin method they find helpful in such cases. Löffler's modifications of the

method of Uhlenhuth and Nylander has given the best results. The urine is allowed to settle in several conical glasses to obtain sufficient material. Twenty cubic centimeters of the sediment are mixed with an equal quantity of 50 per cent. antiformin and boiled. To 22 c.c. of the cooled fluid add 3 c.c. of a mixture of one volume of chloroform and nine volumes of alcohol, shake thoroughly, and centrifugalize. The sediment containing bacilli, if present, forms a layer above the chloroform. The supernatant fluid is poured off and the sediment *in toto* is transferred to a glass slide and fixed with albumin-glycerin fixative. It is then stained in the usual way for tubercle bacilli. In the case of mixed infections, the antiformin methods permit one to destroy all but the acid fast bacilli and thus to obtain material suitable for animal inoculation when desired. Weaker solutions of antiformin, acting at room or body temperatures, should be employed in obtaining material for inoculation into guinea-pigs, since Löffler states that the tubercle bacilli are not viable after being treated by his method.

On the Presence of "Heart Failure Cells" in the Urine.—E. KOHLER (*Wien. klin. Woch.*, 1911, xxiv, 636) has confirmed the work of Bittorf, who demonstrated cells in the urinary sediment of patients with chronic passive congestion resembling the heart failure cells of the sputum. In 40 patients with chronic passive congestion, Kohler found "heart failure cells" in the urine of 24. All had marked stasis of long duration. In 21 of the cases, free erythrocytes were found; in 12 cases, free pigment, and in 21 of the cases diffuse yellow staining of the cells. The appearance of many of the altered red cells suggested to Kohler that the phagocytosis was recent and this was confirmed by his failure to obtain the Berlin blue reaction. In 7 of 8 cases of renal hematuria, similar cells were, however, found and free pigment as well. "Heart failure cells" in the urine are not, then, diagnostic of chronic passive congestion.

An Experimental Study of the Etiology of Scarlet Fever.—G. BERNHARDT (*Deut. med. Woch.*, 1911, xxxvii, 791) makes a preliminary report on a study of the etiology of scarlet fever. As experimental animals, he employed the following species of lower apes: *Macacus rhesus*, *Macacus cynomolgus*, *Cercopithecus griseus*, *Cercopithecus fuliginosus*. Assuming that the scarlatinal virus, like that of small-pox, possesses a special affinity for epithelium, Bernhardt selected as inoculation material the thick, white, easily removed coating of the tongue of scarlet fever patients just before the appearance of the "raspberry tongue." The material contained, of course, numerous saprophytes and pathogenic organisms, especially streptococci, in addition to the hypothetical scarlatinal virus. The tongue scrapings were rubbed in mortars with salt solution and some of the emulsion injected subcutaneously in the groin of the experimental animal. Part of the emulsion was also placed in the animal's mouth, minute lesions of the mucosa having been made as portals of entry for the virus. There was a rise of temperature, and, between the third and fifth days, glands were removed from the groin on the side opposite to that injected, emulsions prepared from the glands and injected into healthy animals. By the third passage material was obtained which was sterile